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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.       | CONFIRMATION NO.       |
|--|-------------|----------------------|---------------------------|------------------------|
| 10/538,104   | 06/08/2005  | Jens Pollmann-Retsch | DE020302                  | 1362                   |
| 24737  | 7590        | 12/14/2007           |                           |                        |
| PHILIPS INTELLECTUAL PROPERTY & STANDARDS<br>P.O. BOX 3001<br>BRIARCLIFF MANOR, NY 10510 |             |                      | EXAMINER<br>ALEMU, EPHREM |                        |
|  |             |                      | ART UNIT<br>2821          | PAPER NUMBER           |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/538,104 | <b>Applicant(s)</b><br>POLLMANN-RETSCH ET AL. |  |
|                              | <b>Examiner</b><br>Ephrem Alemu      | <b>Art Unit</b><br>2821                       |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 26-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 26-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/17/07</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

1. The amendment filed 9/24/07 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "at least one intermediate value for the cooling or the power to the lamp or both, which intermediate value is between full on and full off; and at least one timing relative to the actuation indication and associated with the intermediate value" as required in claims 26 and 29, respectively, is not supported by the original disclosure.

Applicant is required to cancel the new matter in the reply to this Office Action.

### *Claim Objections*

2. Claims 31 and 32 are objected to because of the following informalities:

In claim 31, line 2, replace "a" (1<sup>st</sup> occurrence) with --the-- for proper antecedent basis.

In claim 31, line 3, replace "a" (2<sup>nd</sup> occurrence) with --the-- for proper antecedent basis. Appropriate correction is required.

In claim 32, line 2, replace "a" (1<sup>st</sup> occurrence) with --the-- for proper antecedent basis.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 26-43 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

In claim 26, lines 7-10, the limitations "at least one intermediate value for the cooling or the power to the lamp or both, which intermediate value is between full on and full off; and at least one timing relative to the actuation indication and associated with the intermediate value" was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

In claim 29, lines 6-9, the limitations "at least one intermediate value for the cooling or the power to the lamp or both, which intermediate value is between full on and full off; and at least one timing relative to the actuation indication and associated with the intermediate value" was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 26-30, 32-36 and 38-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belliveau (6,621,239), previously cited by examiner.

Re claims 29, 34, 35, 38, 36, 43, as best understood, Belliveau discloses a lighting unit (i.e., projection system) having a discharge lamp (124), an assembly comprising a lamp driver (i.e., power supply 120), a cooling device (i.e., fan or motor (not shown)), at least one device (i.e., thermal sensor 116) for detecting at least one predetermined operating parameter of the discharge lamp (i.e., metal halide lamp 124), together with a control unit (i.e., microprocessor 102), the control unit (i.e., microprocessor 102) for controlling the lamp driver (i.e., power supply 120) and/or the cooling device (i.e., fan or motor (not shown)) at least during switching on and/or off of the lighting unit in such a way that there is no excursion from a predetermined range of the at least one operating parameter; wherein the lamp driver (i.e., power supply 120) and/or the cooling device (i.e., fan or motor (not shown)) being controllable by the control unit (i.e., microprocessor 102) as a function of the output signal of the at least one detected predetermined operating parameter of the discharge lamp (Figs. 5, 9, 11; Col. 8, lines 12-65; Col. 9, line 35- Col. 10, line 9; Col. 12, lines 12-17).

Although, Belliveau does not specifically mention the control unit (i.e., microprocessor 102) providing control signals to coordinate cooling and power to the lamp, the control signals specifying: at least one intermediate value for the cooling or the power to the lamp or both, which intermediate value is between full on and full off; at least one timing relative to the actuation indication and associated with the intermediate value; and parameters for turning the cooling and power to the lamp full on or full off, in

accordance with whether the lamp is to be switched on or off, respectively, Belliveau clearly teaches that the controller (i.e., microprocessor 102) may include algorithm and temperature specification to decide how much and when to alter the power as well as fan speed to modify or prohibit the operation of certain parameters that tend to generate heat when the sensed temperature is high (Col. 9, line 35- Col. 10, line 9; Col. 11, lines 45-65). In addition, the controller (i.e., microprocessor 102) of Belliveau device varying the power supply to any certain degree to incrementally lower the power applied to the lamp relates to the intermediate value which is between the full on and full off state of operation (Col. 9, lines 51-62).

Therefore, given Belliveau's control unit (i.e., microprocessor 102), providing control signals to coordinate cooling and power to the lamp, the control signals specifying: at least one intermediate value for the cooling or the power to the lamp or both, which intermediate value is between full on and full off; at least one timing relative to the actuation indication and associated with the intermediate value; and parameters for turning the cooling and power to the lamp full on or full off, in accordance with whether the lamp is to be switched on or off, respectively would have been obvious for the purpose of modifying or prohibiting the operation of certain parameters that tend to generate heat when the sensed temperature is high.

Re claims 30 and 32, Belliveau's further discloses the controller (i.e., microcontroller 102) includes a memory for controlling both the lamp driver and the cooling device for maintaining a desired temperature (Col. 8, lines 12-14; Col. 10, lines 42-43). Thus, providing a switching schedule comprising predetermined stepwise adjustments (alternately adjusting) to control parameters of both the lamp driver and the

cooling device in accordance with the lamp to be switched on or off, respectively would have been obvious since Belliveau teaches by varying the lamp driver (i.e., lamp power) and the cooling device (i.e., fan speed) for maintaining the sensed temperature at the desired value and maintaining the light output of the lamp at a relatively constant value (Figs. 9, 11; Col. 7, lines 45-61; Col. 12, lines 12-61).

Re claims 33, 39, 40 and 41, although, Belliveau does not mention about having a sensor for detecting a parameter of the cooling device (i.e., fan) in addition to the at least one parameter of the lamp, Belliveau teaches of providing multiple sensors for the purpose of separately monitoring each signal and making thermal decision in the controller (i.e., microprocessor 102) based on the individual values (Col. 8, lines 33-65).

Therefore, providing a sensor for detecting at least one parameter of the cooling device in addition to the at least one parameter of the lamp for Belliveau's lighting unit would have been obvious to one having ordinary skill in the art for no other reason than controlling the temperature condition within the lamp unit based on the at least one operating condition of the cooling device (i.e., fan) and the at least one parameter of the lamp. Further, the operating parameter of the cooling device being velocity, pressure and/or volume of a gas stream directed onto the lamp would have been obvious for no other reason than providing forced air to the lamp at a variable rate.

Re claim 42, although, Belliveau does not specifically mention the second sensor arranged on the discharge vessel of the discharge lamp for detecting the temperature of the wall of a discharge vessel. Belliveau clearly states the sensor position may be chosen near a particular component such as a lamp 124 for precise control of the temperature thereof (Fig. 5, Col. 8, lines 47-52).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the second sensor (i.e., thermal sensor 106) for sensing the temperature on the wall of a discharge vessel of the discharge lamp for no other reason than precisely controlling the temperature of the discharge lamp as taught by Belliveau.

Re claims 26, 27 and 28, given Belliveau device as discussed above in claims 29, 30 and 32, the method for preventing mechanical stress to a discharge vessel as claimed in claims 26, 27 and 28 is inevitable.

7. Claims 31 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belliveau (6,621,239) in view of Parker (US 4,283,658).

Re claims 31 and 37, Belliveau does not disclose the control unit detects the lamp current and/or the lamp voltage and/or the lamp power via the trigger circuit, which is connected with the second input of the control unit.

In the same field of endeavor, Parker teaches of providing a sensor for sensing at least one electrical parameter (i.e., current, voltage or power) of the lamp for controlling a lamp driver (i.e., power supply 12 and/or a cooling device (i.e., fan 29) for the purpose of maintaining the operating point of a discharge lamp (Fig. 1; abstract; Col. 5, lines 3-27; Col. 6, lines 52-58).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the controller circuit of Belliveau by providing a sensor for sensing at least one electrical parameter (i.e., current, voltage or power) of the lamp for the purpose of controlling the lamp at a desired temperature range.



***Response to Arguments***

8. Applicant's arguments filed 9/24/07 have been fully considered but they are not persuasive. In response to applicant argument, in pages 9 and 10, the applied references fail to specify the switching on and switching off intervals state of operation or the intermediate value is respectfully disagreed.

The applied patent of Belliveau above not only relate to steady state operation, the switching on and switching off intervals state of operation or the intermediate value have been included. Specifically, in col. 9, line 51- Col. 10, line 9, Belliveau discuss the lamp initially being operated at either the default or the command power level which is the on state of operation and the controller (i.e., microprocessor 102) continually checking the sensed parameter (i.e., temperature) of lamp which relates to the steady state and off state operation. In addition, the controller (i.e., microprocessor 102) varying the power supply to any certain degree to incrementally lower the power applied to the lamp relates to the intermediate value between the off and on state of operation. Furthermore, Belliveau further teaches the formulation of a temperature specification depend on the objective of the designer or user (Col. 7, lines 3-32). Thus, the switching on and switching off intervals state of operation or the intermediate value as required in the instant application would have been inherent and/or obvious as taught by Belliveau.


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ephrem Alemu whose telephone number is (571) 272-1818. The examiner can normally be reached on M-F 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W Owens can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EA  
12-07-07



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